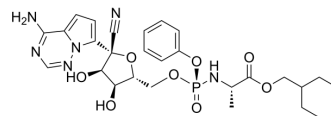


## Remdesivir

<b>Cat. No.:</b>	HY-104077		
<b>CAS No.:</b>	1809249-37-3		
<b>Molecular Formula:</b>	C <sub>27</sub> H <sub>35</sub> N <sub>6</sub> O <sub>8</sub> P		
<b>Molecular Weight:</b>	602.58		
<b>Target:</b>	SARS-CoV; DNA/RNA Synthesis		
<b>Pathway:</b>	Anti-infection; Cell Cycle/DNA Damage		
<b>Storage:</b>	Powder	-20°C	3 years
	In solvent	-80°C	6 months
		-20°C	1 month



### SOLVENT & SOLUBILITY

<b>In Vitro</b>	DMSO : 100 mg/mL (165.95 mM; Need ultrasonic)				
		Solvent Concentration	Mass		
	<b>Preparing Stock Solutions</b>		1 mg	5 mg	10 mg
		1 mM	1.6595 mL	8.2977 mL	16.5953 mL
		5 mM	0.3319 mL	1.6595 mL	3.3191 mL
	10 mM	0.1660 mL	0.8298 mL	1.6595 mL	
Please refer to the solubility information to select the appropriate solvent.					
<b>In Vivo</b>	<ol style="list-style-type: none"> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline) Solubility: ≥ 2.5 mg/mL (4.15 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline Solubility: ≥ 2.17 mg/mL (3.60 mM); Clear solution</li> <li>Add each solvent one by one: 10% DMSO &gt;&gt; 90% corn oil Solubility: ≥ 2.17 mg/mL (3.60 mM); Clear solution</li> </ol>				

### BIOLOGICAL ACTIVITY

<b>Description</b>	Remdesivir (GS-5734), a nucleoside analogue with effective antiviral activity, has EC <sub>50</sub> s of 3.3 μM, 4.7 μM, 32 μM, 3.7 μM and 9.2 μM for SARS-CoV-2 and its variants alpha, beta, gamma and delta, respectively. Remdesivir is highly effective in the control of SARS-CoV-2 (COVID-19) infection in vitro <sup>[1][2][3]</sup> .
<b>IC<sub>50</sub> &amp; Target</b>	EC <sub>50</sub> : 30 nM (murine hepatitis virus, delayed brain tumor cell), 74 nM (SARS-CoV, HAE cell), 74 nM (MERS-CoV, HAE cell) <sup>[1]</sup> EC <sub>50</sub> : 3.3 μM (SARS-CoV-2), 4.7 μM (SARS-CoV-2 alpha), 32 μM (SARS-CoV-2 beta), 3.7 μM (SARS-CoV-2 gamma) and 9.2 μM (SARS-CoV-2 delta) <sup>[3]</sup>

## In Vitro

Remdesivir (GS-5734) inhibits murine hepatitis virus (MHV) with an EC<sub>50</sub> of 30 nM, and blocks SARS-CoV and MERS-CoV in HAE cells with EC<sub>50</sub>s of both 74 nM in HAE cells after treatment for 24 h<sup>[1]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## CUSTOMER VALIDATION

- N Engl J Med. 2023 Jan 5;388(1):89-91.
- Nature. 2021 May;593(7859):418-423
- Nature. 2020 Jun;582(7813):561-565.
- Science. 2021 Nov 26;374(6571):1099-1106.
- Science. 2020 Jun 26;368(6498):1499-1504.

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## REFERENCES

- [1]. Hu H, et al. Optimization of the Prodrug Moiety of Remdesivir to Improve Lung Exposure/Selectivity and Enhance Anti-SARS-CoV-2 Activity. J Med Chem. 2022 Sep 22;65(18):12044-12054.
- [2]. Agostini ML, et al. Coronavirus Susceptibility to the Antiviral Remdesivir (GS-5734) Is Mediated by the Viral Polymerase and the Proofreading Exoribonuclease. MBio. 2018 Mar 6;9(2). pii: e00221-18.
- [3]. Wang M, et al. Remdesivir and chloroquine effectively inhibit the recently emerged novel coronavirus (2019-nCoV) in vitro. Cell Res. 2020 Mar;30(3):269-271.

**Caution: Product has not been fully validated for medical applications. For research use only.**

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